PRODUCTION OF SINGLE CRYSTAL OF GROUP III-V COMPOUND SEMICONDUCTOR

PRODUCTION OF SINGLE CRYSTAL OF GROUP III-V COMPOUND SEMICONDUCTOR

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Abstract

PURPOSE:To ensure growth with a throughput higher than an atomic layer epitaxy (ALE) with chloride under ordinary pressure and to obtain a high purity grown film by carrying out ALE in high vacuum with molecular beams of the monochloride of a group III metal and molecular beams of a molecule contg. a group V atom.
CONSTITUTION:Molecular beams of the monochloride of a group III metal and molecular beams of a molecule contg. a group V atom are alternately projected on a single crystal substrate set in high vacuum to grow a single crystal of a III-V compd. semiconductor on the substrate. The monochloride of a group III metal is formed by the reaction of the group III metal with chlorine or hydrogen chloride.